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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/757,025	01/14/2004	Hiroshi Uruno	HGM-124-A	3269

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EXAMINER	
MCMAHON, MARGUERITE J	
ART UNIT	**PAPER NUMBER**
3747	

DATE MAILED: 03/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/757,025	URUNO ET AL.	
	Examiner	Art Unit	
	Marguerite J. McMahon	3747	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-21 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-21 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 8, 9, 20, and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Glovatsky et al (6,186,106). Note an intake plenum 50 with runners 54 extending out to all of the cylinder bores. A plurality of electrically conductive parts 102, 104, 114, etc (see Figures 3 and 4) comprising an engine control module and wires (see column 3, lines 24-38) are disposed around said intake plenum 50 and are covered with a one-piece shield cover 112 attached to the engine body in such a manner as to cover at least part of said intake plenum. The intake manifold is considered to be part of the engine body. Applicant's attention is also directed to the embodiment of Figure 10, which shows a unitary shield cover or rigid housing 330, wherein the shield cover is provided in a size and shape sufficient to protectively cover all of the fuel injectors 94 and injection coils (not shown, but see column 7, lines 43-51), wherein the shield is configured to substantially cover said cylinder bores (see column 7, lines 1, 16, and 17), and wherein the shield cover provides a barrier which resists passage of external electromagnetic waves therethrough, in order to protect said plurality of electric parts (this is inherent). Note that the amendment to claim 1 is worded in such a way that the language could be interpreted to indicate either that an electrically conductive material is located between the cover and the engine body, or that the electrically conductive material is providing a direct electrical

connection between the cover and the engine body. Either or both of these situations may be present in the Glovatsky et al reference, but at least the first situation, i.e. the electrically conductive material being located between the shield and the engine body is present.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Glovatsky et al (6,186,106) in view of Uchida (5,630,386). Glovatsky et al show everything except each of the runners comprising connecting pipes having outwardly flared pickup ends, each runner comprising an arcuately curved intake pipe, and each connecting pipe curving rearwardly in the plenum. Uchida teaches that it is old in the art to employ runners comprising connecting pipes having outwardly flared pickup ends, each runner comprising an arcuately curved intake pipe, and each connecting pipe curving rearwardly in the plenum. It would have been obvious to one of ordinary skill in the art to modify Glovatsky et al by employing runners comprising connecting pipes having outwardly flared pickup ends, each runner comprising an arcuately curved intake pipe, and each connecting pipe curving rearwardly in the plenum, in order to improve flow characteristics of the intake air flowing through the runners.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Glovatsky et al (6,186,106) in view of Uchida (5,630,386) as applied to claims 3-5 above, and further in view of Brackett (5,560,327). Glovatsky et al in view of Uchida show everything except the engine

having a configuration wherein the cylinder bores are opposed to each other and sandwiching a crankshaft, which is supported on a crankcase, and wherein the intake plenum 54 is disposed above said crankcase (see Figure 1A). Brackett teaches that it is old in the art to utilize an engine configuration wherein the cylinder bores are opposed to each other and sandwiching a crankshaft, which is supported on a crankcase, and wherein the intake plenum is disposed above said crankcase. It would have been obvious to one having ordinary skill in the art to modify Glovatsky et al in view of Uchida by providing an opposed cylinder bore engine configuration, as shown by Brackett, as such an engine configuration is an alternative equivalent to the Vee-type engines utilized by Glovatsky et al and Uchida, and is conventional in the engine art.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Glovatsky et al (6,186,106) in view of Croft et al (3,814,069). Glovatsky et al show everything except an electronic control unit attached to an outer face of a side wall of the intake plenum and a sensor for detecting a condition in said intake plenum extending from the control unit through a side wall into the intake plenum. Croft et al teach that it is old in the art to employ a pressure sensor 29 extending through a side wall into the intake plenum 12 (see Figures 1 and 2), which is connected to an electronic control system 28. It would have been obvious to one of ordinary skill in the art to modify Glovatsky et al by employing a pressure sensor extending from the control unit through a side wall into the intake plenum, in order to detect the pressure in the intake plenum, thus providing improved control information to the control unit, and to attach the electronic control unit which receives information from the pressure sensor to an outer face of a side wall of the intake plenum 12, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70.

Claim 10 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Glovatsky et al ((6,186,106). Glovatsky et al show everything except employing an air cleaner. It would have been obvious, if not inherent, that an air cleaner housing operatively connected to the throttle body would be utilized, in order to filter the incoming air, as is conventional, in the engine art.

Claims 11, 13, and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Glovatsky et al (6,186,106) in view of Brackett (5,560,327). Glovatsky et al show everything except a ground connector electrically connecting the shield cover to the engine body, the ground connector comprising an electrically conductive material sandwiched beween the shield cover and the engine body andthe engine having a configuration wherein the cylinder bores are opposed to each other and sandwiching a crankshaft, which is supported on a crankcase, and wherein the intake plenum is disposed above said crankcase. Brackett teaches that it is old in the art to utilize an engine configuration wherein the cylinder bores are opposed to each other and sandwiching a crankshaft, which is supported on a crankcase, and wherein the intake plenum 54 is disposed above said crankcase (see Figure 1A). It would have been obvious to one having ordinary skill in the art to modify Glovatsky et al by providing an opposed cylinder bore engine configuration, as shown by Brackett, as such an engine configuration is an alternative equivalent to the Vee-type engines utilized by Glovatsky et al and Uchida, and is conventional in the engine art. With respect to the newly added limitation in claim 11 that the shield cover comprises a metal plate and is electrically connected to the engine body, i.e. grounded, see column 4, lines 27-31, which indicate that the cover may be made of metal. Note that it would be likely that a metal cover attached to a conventional (i.e. metal) engine would be electrically connected, i.e.

grounded, since it is made of metal and metal is electrically conductive. However, even if the metal shield were not grounded by some sort of electrical connector between the shield and the engine, the device would function in the same manner. Note that Applicant has not disclosed that grounding the shield solves any stated problem or is for any particular purpose. Moreover, it appears that the device would perform equally well if the shield were not grounded to the engine. Thus, it would have been an obvious matter of design choice to ground the shield to the engine body.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Glovatsky et al (6,186,106) in view of Brackett (5,560,327) as applied to claim 11 above, and further in view of Croft et al (3,814,069). Glovatsky et al in view of Brackett show everything except a sensor for detecting a condition in said intake plenum extending from the control unit through a side wall into the intake plenum. Croft et al teach that it is old in the art to employ a pressure sensor 29 extending through a side wall into the intake plenum 12 (see Figures 1 and 2). It would have been obvious to one of ordinary skill in the art to modify Glovatsky et al in view of Brackett by employing a pressure sensor extending from the control unit through a side wall into the intake plenum, in order to detect the pressure in the intake plenum, thus providing improved control information to the control unit.

Claims 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Glovatsky et al (6,186,106) in view of Brackett (5,560,327) as applied to claims 11 and 13above, and further in view of Uchida (5,630,386). Glovatsky et al in view of Brackett show everything except each of the runners comprising connecting pipes having outwardly flared pickup ends, each runner comprising an arcuately curved intake pipe, and each connecting pipe curving

rearwardly in the plenum. Uchida teaches that it is old in the art to employ runners comprising connecting pipes having outwardly flared pickup ends, each runner comprising an arcuately curved intake pipe, and each connecting pipe curving rearwardly in the plenum. It would have been obvious to one of ordinary skill in the art to modify Glovatsky et al in view of Uchida by employing runners comprising connecting pipes having outwardly flared pickup ends, each runner comprising an arcuately curved intake pipe, and each connecting pipe curving rearwardly in the plenum, in order to improve flow characteristics of the intake air flowing through the runners.

Response to Arguments

Applicant's arguments filed 12/13/05 have been fully considered but they are not persuasive. Applicant argues that Glovatsky (6,186,106) does not disclose electrically grounding the shield cover. Although it is debatable whether or not this feature is relevant to claim 1, it is relevant to claim 11. The examiner has noted in the above rejection that it would be likely that a metal cover attached to a conventional (i.e. metal) engine would be electrically connected, i.e. grounded, since it is made of metal and metal is electrically conductive. However, even if the metal shield were not grounded by some sort of electrical connector between the shield and the engine, the device would function in the same manner. Note that Applicant has not disclosed that grounding the shield solves any stated problem or is for any particular purpose. Moreover, it appears that the device would perform equally well if the shield were not grounded to the engine.

Applicant further argues that Uchida (5,630,386) does not show connecting pipes curving downwardly and inwardly toward the centerline of the engine rather than rearwardly of the engine, as claimed. This argument is spurious, as it depends upon the orientation of the engine in

the vehicle, which is variable depending upon the application. If the engine were employed in a horizontal cylinder or vertical crankshaft application (two ways or saying the same thing) which is a conventional engine application, the connecting pipes or runners of Uchida would be curved in a rearward direction. In addition, it is noted that Applicant has not disclosed that this feature solves any stated problem or is for any particular purpose. Moreover, it appears that the device would perform equally well if the connecting pipes were not curved in a rearwardly facing direction.

Applicant further argues that Croft (3,814,069) does not show an electronic control unit attached to an outer face of a side wall of the intake plenum. As noted in the above rejection, it would have been obvious to one having ordinary skill in the art to attach the electronic control system to an outer face of a side wall of the intake plenum, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marguerite J. McMahon whose telephone number is 571-272-4848. The examiner can normally be reached on flex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yuen Henry can be reached on 703-308-1946. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MARGUERITE MCMAHON
PRIMARY EXAMINER